

L 44369-66 EWT(m)/EWP(j)/I IJ2(c) RM/WW
ACC NR: AP6023061 (A) SOURCE CODE: UR/0191/66/000/004/0022/0023

AUTHOR: Renard, T. L.; Korshak, V. V.; Kamenskiy, I. V.; Tseytlin, G. M.; Belova, M. P.; Kafanova, V. F.; Avtokratova, N. D.

ORG: none

TITLE: Polytetramethylolcyclopentanone maleinate and glass-textolite based on it

SOURCE: Plasticheskiye massy, no. 4, 1966, 22-23

TOPIC TAGS: glass textolite, polyester plastic, maleic anhydride, ketone, IR spectrum

ABSTRACT: Thermomechanical properties of unsaturated polyester oligomers (UPO) prepared by fusing 2,2,5,5-tetra(oxymethyl)-cyclopentanone with maleic anhydride were studied. The fusion was carried out at 150°C in an inert gas and the liberated water was continually removed from the reaction zone. The physicomechanical properties of glass textolites based on several commercial glass cloths and UPO were examined and tabulated. The unsaturated polyester oligomers were hardened by holding at 120-250°C for 0.5-10 hrs. It was found that the lower the hardening temperature, the lower the temperature of initial deformation and the percentage of insoluble matter. At 200°C, a complete hardening was achieved in 30 minutes. The structure of the unsaturated polyester oligomers hardened at 200°C for 0.5-6 hours was determined from IR spectra. Orig. art. has: 3 figures, 2 tables.

SUB CODE: 11,07/ SUBM DATE: none/

ORIG REF: 006/

OTH REF: 002

Card 1/1 hs

UDC: 678.744.342 : 678.5.06 : 677.521

453140-55 EWT(m)/EPF(c)/EPR/ENP(j)/T/EWA(c) Pc-4/Pr-4/Ps-4 RPL
 RM/PL/RM

ACCESSION NR: AP5015287

UR/0286/65/000/009/0066/0067
 678.634/.639.002.2

AUTHOR: Korshak, V. V.; Tseytlin, G. M.; Pavlov, A. I.; Izyneyev, A. A.

TITLE: Preparative method for heat-resistant polymers. Class 39, No. 170659

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 66-67

TOPIC TAGS: polybenzoxazole, heat resistant polymer, preparation

ABSTRACT: An Author Certificate has been issued for a preparative method for heat-resistant polymers (polybenzoxazoles) involving the polycondensation of aromatic dicarboxylic acids (or esters thereof) with aromatic amines. To produce heat-resistant and soluble polybenzoxazoles, the aromatic amine to be used is bis(3-amino-4-hydroxyphenyl)propane or bis(3-amino-4-hydroxy-5-methylphenyl)propane. [SM]

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut im. Mendeleyeva
 (Moscow Chemical Engineering Institute)

SUBMITTED: 27Apr64
 NO REF SOV: 000

ENCL: 00
 OTHER: 000

SUB CODE: oc, cc
 ATD PRESS: 4019

Card 1/1

TSEYTLIN, Grigoriy Yul'yevich; ROYTBERG, Petr Arkad'yevich;
MOSKAROVA, T.P., red.

[Planned preventive repairs of hydraulic structures of
harbors] Planovo-predup.editel'nye r monty portovykh gid-
rotekhnicheskikh sooruzhenii. Moskva, Transport, 1964.
107 p. (MIRA 17:9)

15.8090

39636
S/191/62/000/008/002/013
B124/B138

AUTHORS: Kamenskiy, I. V., Tseytlin, G. M.

TITLE: Polymer materials based on condensation products of aldehydes with alicyclic ketones. Synthesis and investigation of cyclopentanone formaldehyde resins

PERIODICAL: Plasticheskiye massy, no. 8, 1962, 12-14

TEXT: Polycondensation of cyclopentanone (C) with formaldehyde (F) was conducted in aqueous-alcoholic solution with soda as catalyst. The highest yields of polycondensate (119% by weight of the used C) were obtained with F:C = 1:1.5. Table 2 shows the properties of the products obtained. All resins obtained from equimolar mixtures or those with excess F are thermo-setting and this process is made faster by basic catalysts. The products have high heat resistance (about 300°C), they are water-resistant and chemically very stable. The resins synthesized from mixtures with excessive C are thermoplastic but can also be set by adding basic catalysts. There are 2 figures and 2 tables. The English-language reference is: US Patent 1985870. X

Card 1/3

S/191/62/000/008/002/013
B124/B138

Polymer materials based on ...

Table 2. Properties of cyclopentanone formaldehyde resins.

Legend: (A) Property, (B) resin obtained with a C-F ratio of, (C) appearance and color, (D) molecular weight, (E) OH groups, %, (F) elementary composition, %, (G) carbon, (H) hydrogen, (J) drop point, °C, (K) setting time on plate at 200°C, min, (L) of pure resin, (M) resin with 1% NaOH, (N) solubility: soluble in, (P) insoluble in, (R) vitreous, brittle, red-brown product, (S) maximum 95°C, (T) not thermosetting, (U) water-benzene mixture (20:80), acetic acid, (V) chlorinated hydrocarbons, dioxane, ethers, ketones, (W) white powders whose aqueous-alcoholic solutions give colorless films after drying on glass, the films turning yellow above 140°C, (X) softens without melting, (Y) ethyl- and butyl alcohol, acetone, (Z) chlorinated hydrocarbons, ethers (petroleum and sulfuric ether), dioxane, aromatic hydrocarbons (benzene, toluene, chlorobenzene, etc.).

Card 2/3

Polymer materials based on ...

S/191/62/000/008/002/C13
B124/3138

Показатели		Содержание при дозировке	
(A)		(B)	
2:1		1:1	
1:1.5		1:1.5	
Внешний вид окраски ...		Внешний вид окраски ...	
(R)		(N)	
Безвкусный, белый, кристаллический, прозрачный, при нагревании ...		Безвкусный, белый, кристаллический, прозрачный, при нагревании ...	
481		863	
Содержание группы, % (с)		Содержание группы, % (с)	
0.19		7.59	
Элементарный состав, % (F)		Элементарный состав, % (F)	
73.48		69.19	
8.52		8.33	
Температура плавления, °C		Температура плавления, °C	
8.52		8.36	
Время отпрежде-ния на инт-ке при 200 °C, мин		Время отпрежде-ния на инт-ке при 200 °C, мин	
(S)		(X)	
Не более 95 °C		Не более 95 °C	
(T)		(X)	
Не отверждается		Не отверждается	
109		16.5	
Растворимость: NaOH (Y)		Растворимость: NaOH (Y)	
109		4.0	
(U)		(Y)	
В спирто-бензоль-ной смеси (20:80), уксусной кислоте		В спирто-бензоль-ной смеси (20:80), уксусной кислоте	
(N)		(Y)	
Не растворяется		Не растворяется	
(P)		(Y)	
В хлорпропановых, уксусно-эфи-рах, кетонах		В хлорпропановых, уксусно-эфи-рах, кетонах	

Table 2
Card 3/3

KAMENSKIY, I.V.; TSEYTLIN, G.M.

Polymeric materials based on the condensation products of aldehydes with alicyclic ketones; structure of cyclopentanone-formaldehyde resins. Plast.massy no.5:19-23 '63. (MIRA 16:6)

(Resins, Synthetic) (Cyclopentanone) (Formaldehyde)

L 12966-63

ENP(j)/EPF(c)/ENT(m)/BDS

AFETC/ASD Pc-4/Pr-4 RM/WW

ACCESSION NR: AP3000397

S/0191/63/000/005/0019/0023

AUTHOR: Kamenskiy, I. V.; Tseytlin, G. M.

TITLE: Polymer materials based on the products of condensation of aldehydes with alicyclic ketones. Concerning the structure of cyclopentanone-formaldehyde resins

SOURCE: Plasticheskiye massy*, no. 5, 1963, 19-23

TOPIC TAGS: aldehydes, alicyclic ketones, cyclopentanone-formaldehyde resins, polymers

ABSTRACT: In view of the lack of data in the literature on the chemical steps involved in obtaining cyclopentanone-formaldehyde resins, the authors studied the resin-yielding reactions occurring with an excess of cyclopentanone (thermoplastics) and of formaldehyde (thermosets). They have described the procedures used and the properties of the resins obtained in an earlier publication (Plasticheskiye massy*, no. 8, 1962). After fractional precipitation of the products with water from 10% acetone solution, the empirical formulas, molecular weight, and hydroxyl group content of the fractions were determined and their infrared spectra compared. The results indicated that the intermediate products formed in the process of cyclopentanone formaldehyde resin production with excess formaldehyde have the following structure: 2,5-dihydroxymethyl-2,5-di-(2'-cyclopentanonylmethyl)-cyclo-

Card 1/2

L 12966-63

ACCESSION NR: AP3000397

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pentanone. When the same reaction is carried out with excess cyclopentanone, the intermediate products have the probable structure: 2,2,5,5-tetra-(2'-cyclopentanonylmethyl)-cyclopentanone. It is hypothesized that increased molecular weight results from further polycondensation of these compounds. The three-dimensional structure of cyclopentanone-formaldehyde resins is ascribed to the role in high-temperature resin formation of the polymer's hydroxyl and carbonyl groups, the latter being unaffected in the melted and soluble resin stage. Orig. art. has: 6 figures, 6 formulas, 1 table.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 10Jun63

ENCL: 00

SUB CODE: MA

NO REF SOV: 002

OTHER: 004

Card 2/2

ZASLAVSKIY, I.D.; TSEYTIM, G.S.

Singular coverings and the related properties of recursive
functions. Trudy Mat.inst. 67:458-502 '62. (MIRA '16:2)
(Functions) (Mathematical analysis)

SHIKHIYEV, Fuad Maksimovich; YEROFYEV, Nikolay Ivanovich; GINSBARG,
Ruvim Izrailevich; TSEYTLIN, Grigoriy Yul'yevich; OBERMEYSTER,
A.M., red.; MARCHUKOVA, M.G., red. izd-va; TIKHONOVA, Ye.A.,
tekhn. red.

[Organization and equipment of sea ports] Ustroistvo i oboru-
dovanie morskikh portov. Moskva, Izd-vo "Morskoi transport,"
1960. 413 p. (MIRA 14:5)

(Harbor)

TSEYTLIN, Grigoriy Yul'yevich; ROYTBURG, Petr Arkad'yevich;
MOSHAPOVA, T.P., red.

[Routine maintenance of the hydraulic structures of
harbors] Planovopredupreditel'nyi remont portovykh gid-
rotekhnicheskikh sooruzhenii. Moskva, Transport, 1964.
107 p. (MIRA 18:2)

TSEYTHIN, Grigoriy Yul'yevich

SHIKHIYEV, Fuad Maksimovich, kandidat tekhnicheskikh nauk; ORDELLI, Mikhail Arkad'yevich, inzhener; ~~TSEYTHIN, Grigoriy Yul'yevich~~, inzhener; PLAKIDA, M.E., redaktor; SAFONOV, P.V., redaktor izdatel'stva; TIKHONOVA, Ye.A., tekhnicheskii redaktor

[Experience in building hydraulic structures] Opyt stroitel'stva gidrotekhnicheskikh sooruzhenii. Moskva, Izd-vo "Morskoi transport," 1957. 118 p. (MLRA 10:9)
(Hydraulic engineering)

TSEYTHIN, I. I.

Technology

Duplicate-metalcutting machines, Moskva, Mashriz, 1951.

Monthly List of Russian Accessions, Library of Congress, December 1952. UNCLASSIFIED.

TSEYTLIN, G.Yu.; BUDRIK, V.I.

Experience in building precast wharves. Transp.stroi. 9 no.2:
15-18 F '59. (MIRA 12:5)

1. Glavnyy inzhener glavstroyotryada No.2 tresta Chernomorgidrostroy
(for Tseytlin). 2. Nachal'nik Chernomorskoy normativno-issledovatel'-
skoy stantsii (for Budrik).
(Wharves)

(Precast concrete construction)

SHIKHIYEV, F.M., kand. tekhn. nauk; TSEYTLIN, G.Yu., inzh.

Using precast elements in constructing wharves. Nov. tekhn. mont. i
spets. rab. v stroi. 21 no.2:22-24 F '59. (MIRA 12:1)
(Precast concrete construction) (Wharves)

TSEYTLIN, G.Yu., inzhener.

Using precast reinforced concrete in building the headings of
pile moorings. Transp.stroi. 6 no.2:18-19 F '56. (MLRA 9:6)
(Wharves)

LOPATUKHINA, A., inzh.; TSEYTLIN, I., inzh.; LISNYAK, T., inzh. (Moskva)

New method of lacquering. Prom. koop. 13 no. 4:13 Ap '59.
(MIRA 12:6)

(Metals--Finishing)

TSEYTLIN, I.G., prof.

Basic problems in the care of children of preschool and school
age. *Pediatrics* 37 no.6:3-10 Je '59. (MIRA 12:9)
(SCHOOL HEALTH,
in Russia, 7-year-plan (Rus))
(CHILD WELFARE,
same)

AUTHOR: Tseytlin, I.Kh., Engineer

SOV/122-59-5-12/32

TITLE: Nomographic Calculation of Strength of Shafts
(Nomograficheskiy raschet valov na prochnost')

PERIODICAL: Vestnik mashinostroyeniya, 1959, Nr 5, pp 38-41 (USSR)

ABSTRACT: One nomogram (Fig 1) and a Table yield the equivalent diameter for a hollow shaft and a shaft splined by GOST 1139-58 respectively. Another nomogram (Fig 2) yields the tension or shear stress from the equivalent diameter and the bending moment or torque. The third nomogram (Fig 3) yields the safety factor for combined stress from the tensile and shear safety factors. The fourth nomogram (Fig 4) yields the "equivalence factor", computed by the cumulative damage theory, from the load programme. With the help of this factor, two other nomograms (Figures 5 and 6) yield the effective tension or shear stress, respectively. These take into account the endurance strength, the type of machining, the size factor and other points. A stress concentration scale is included. Another nomogram (Fig 7) yields the mean stresses due to flexure or torsion. The fatigue

Card 1/2

SOV/122-59-5-12/32

Nomographic Calculation of Strength of Shafts

safety factor is found by returning to the nomogram of Fig 3. A numerical example is given. There are 8 figures, 1 table and 2 Soviet references.

Card 2/2

SHIRINOV, Sh.G.; TSEYTLIN, I.M.; BAGDASAROVA, E.V.

Relationship between oil recovery and density of well spacing.
Azerb.neft.khoz. 41 no.3:8-10 Mr '62. (MIRA 15:8)
(Apsheiron Peninsula--Oil fields--Production methods)

BORODYANSKIY, E.A.; TSEYTLIN, I.M.; KHINICH, R.Z.

Modernization of the RS-2 rubber mixer. Kauch.i rez. 20 no.3:38-39
Mr '61. (MIRA 14:3)

1. Nauchno-issledovatel'skiy konstruktorsko-tekhnologicheskiy institut
shinnoy promyshlennosti i Omskiy shiriny zavod.
(Rubber machinery)

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757020005-4

APPROVED FOR RELEASE: 03/14/2001

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757020005-4"

KROTIKOV, V.D.; TROITSKIY, V.S.; TSETLIN, N.M.

Radio emission temperature of the Moon and Jupiter at the 10.1
cm. wave length. Astron.zhur. 41 no.5:951-954 S-S '64.

1. Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'-
kovskom gosudarstvennom universitete.

(MIRA 17:10)

L 4602(2-66) EWT(m)/EWP(j) IJI(2) RM

ACC NR: AP6021343

(A)

SOURCE CODE: UR/0318/66/000/002/0025/0027

AUTHOR: Shavlyakov, V. A.; Tseytlin, I. M.; Ryabova, A. L.

47
B

ORG: Omsk Petroleum Refinery (Omskiy neftepererabatyvayushchiy zavod); Omsk Tire Factory (Omskiy shinnyy zavod)

TITLE: Use of petrolatum for protection of rubbers from atmospheric aging ¹⁵

SOURCE: Neftepererabotka i neftekhimiya, no. 2, 1966, 25-27

TOPIC TAGS: petroleum product, antioxidant additive, rubber chemical

ABSTRACT: Tests were performed to determine the protective properties of petrolatum obtained from a deparaffination unit. The data showed that petrolatum from Tuymazy Devonian petroleum increases the resistance of rubber to atmospheric aging, surpassing paraffin and Superlavox in protective properties and equalling Antilux in tests in vulcanizates prepared without using chemical antiozonants. Tests of protective waxes together with chemical antiozonants in tread rubbers based on butadiene-styrene rubber showed that in this case as well, the protective properties of petrolatum are higher than those of imported antiaging agents. The petrolatum studied can be successfully used as a physical antiaging agent in the production of tires and mechanical rubber goods. At the present time, this petrolatum is used under the name of "Anti-aging agent OM-1" in the tire industry, mechanical rubber goods industry, rubber foot-

Card 1/2

UDC: 665.637.73-4:678.06

L 46020-66

ACC NR: AP6021343

wear, etc. Orig. art. has: 6 tables.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 004

Card 2/27C

S/125/60/000/C10/011/015
A161/A133

AUTHORS: Konyushenko, A.T., Golovkin, R.V., Tseytlin, Kh.A., Strunkin, V.A.

TITLE: Resistance of Welded Titanium Pipes in Hydrochloric Acid Saturated
with Chlorine

PERIODICAL: Avtomaticheskaya svarka, 1960, No. 10, pp.67-71

TEXT: The fabrication of titanium tubes by pressing is connected with high metal waste and tool consumption. In view of this fact and of the growing demand of the chemical industry in titanium pipes, the Moskovskiy trubnyy zavod (Moscow Tube Plant) has carried out tests in 1958 to fabricate these tubes by welding, and a technology has been developed for the welding of tubes of 12, 16, 25, 38 and 76 mm in diameter and 1-2 mm wall from VT1 (VT1) titanium. High-grade argon was used for shielding in the way described in a work that will soon be published (Ref.1) and which concerns the welding of tantalum. It is known from another work (Ref.2) that titanium is resistant to HCl solutions being continually saturated with chlorine, but no information could be found in literature (Ref.3-6) on the behaviour of titanium

Card 1/5

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S/125/60/000/010/011/015
A161/A133

Resistance of Welded Titanium Pipes in Hydrochloric Acid Saturated with Chlorine

welds. VT1 titanium tubes of 25 mm diameter and 1.5 mm wall were welded with 160 amp, 12 volt current and 0.6 m/min welding speed, using 4 mm diameter electrodes and a 12 mm diameter nozzle, while the argon consumption was 9 liter/min on the arc and 6 liter/min in the blast. The test specimens were rings cut from the tubes and placed into glass test tubes on glass hooks. Chlorine was blown continually through the test solution (water solution). A test lasted 200 hours. The resistance of the metal was measured by the loss of weight, mechanical properties and microstructure. A corrosion rate of only 0.01 mm per year was found in a 5% HCl solution at 90°C, and 0.1 mm per year in a 20% solution at 60°C. The resistance in fumes was several times higher. The corrosion rate remained practically constant. The microstructure of all specimens was: cast metal of coarse-acicular shape in the weld zone, and fine spherical grain shape with twins in base metal (Fig.2,3). The test results prove the applicability of welded VT1 titanium equipment or tubes in HCl being continually saturated with chlorine; a 5% HCl concentration is permissible for work in temperature not higher than 90°C, and a 20% Card 2/5

S/125/60/000/010/011/015
A161/A133

Resistance of Welded Titanium Pipes in Hydrochloric Acid Saturated with Chlorine

concentration at temperature of not higher than 60°C. The free chlorine content must be about 0.2 g in 100 cm³. There are 3 figures and 6 references: 4 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Moskovskiy trubnyy zavod (Moscow Tube Plant), (A.T. Konyushenko and R.V. Golovkin); NIOPIK im. Voroshilova (NIOPandK im. Voroshilov) (Kh.A. Tseytlin, V.A. Strunkin)

SUBMITTED: March, 14, 1960

Card 3/5

S/125/60/000/010/011/015
A161/A133

Resistance of Welded Titanium Pipes in Hydrochloric Acid Saturated with Chlorine

Figure 2:
The microstructure of a specimen tested for 200 hours in 20% HCl acid at 60°C (x 100): a - welding seam; b - near-weld zone; c - base metal

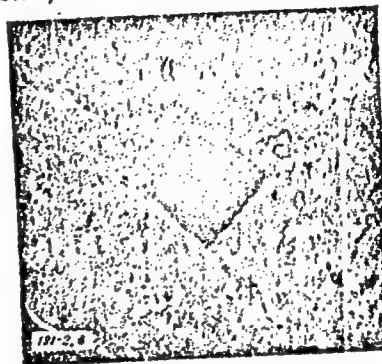


Card 4/5

a)



b)



c)

S/125/60/000/010/011/015
A161/A133

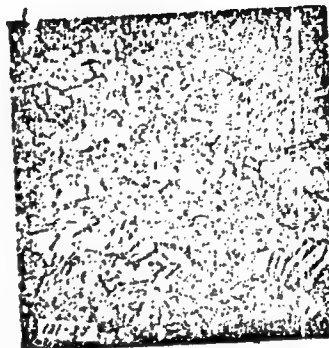
Resistance of Welded Titanium Pipes in Hydrochloric Acid Saturated with Chlorine

Figure 3:

The microstructure of a specimen tested for 200 hours in the fumes of a 20% hydrochloric acid containing chlorine, at 60°C (x 100)
a - welding seam
b - base metal



a)



b)

Card 5/5

KONYUSHENKO, A.T.; GOLOVKIN, R.V.; TSEYTLIN, Kh.A.; STRUNKIN, V.A.

Stability of welded titanium pipes in chlorine-saturated
hydrochloric acid. Avtom. svar. 13 no. 10:67-71 0 '60.
(MIRA 13:10)

1. Moskovskiy trubnyy zavod (for Konyushenko, Golovkin).
 2. Nauchno-issledovatel'skiy institut organicheskikh
poluproduktov i krasiteley im. K.Voroshilova (for Tseytilin,
Strunkin).
- (Titanium--Welding) (Hydrochloric acid)

"APPROVED FOR RELEASE: 03/14/2001

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APPROVED FOR RELEASE: 03/14/2001

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"APPROVED FOR RELEASE: 03/14/2001

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1ST AND 2ND CODES																										3RD AND 4TH CODES																									
1ST AND 2ND CODES																										3RD AND 4TH CODES																									
<p>Corrosion-resistant ceramic filter plates. Kh. Tselin. <i>Novosti Tekhn.</i> 1936, No. 46-47, 38-40. Filter plates having a velocity of filtration of 41.91.7 l./sq. m. per hr. under a pressure of 100 mm. of Hg were prepd. in the Kineshima ceramic plant. The powdered plate after boiling with 90% H₂SO₄ lost 7.00% of its wt. The "yield point" equal to 10.37-13 kg. sq. cm. permits use of these plates in the aniline dye industry. A. A. Polgoruy</p>																																																			
<p>ASB-55A METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<p>ca</p>										<p>19</p>									
<p>Ceramic Steels. Kh. I. Tsyglin, Ye. V. Sulgrev, N. S. Potalovskii and I. I. Gerasimov. Russ. 61,616, Aug. 31, 1927. The material consisted of 70-80% of broken porcelain or acid-resistant pebbles and 12-17% fiber of fire clay or low-melting clay is mixed with water, pressed in molds, dried and fired at 1200-1300°.</p>																			
<p>ASM-A.S.A. METALLURGICAL LITERATURE CLASSIFICATION</p>																			
<p>1ST ORDER</p>										<p>2ND ORDER</p>									
<p>3RD ORDER</p>										<p>4TH ORDER</p>									

Metal corrosion in the production of Alizarin Blue. Kh.
L. Tafilin. *Org. Chem. Ind.* (U. S. S. R.) 4, No-12,
54-7(1937).—Fe-Si (17%, 64) resists the action of HBr at
00° and can be used in the bromination of aminoanthra-
quinone. Cr-Fe is suitable material in the condensation
of dibromoaminoanthraquinone with *p*-MeC₆H₄NH₂; and
the process of sulfonation. The use of cast Fe in these

operations results in considerable corrosion of app. and
inferior dye. Chas. Blanc

1ST AND 2ND COVERS																										PROCESSES AND PROPERTIES INDEX																									
COMMON ELEMENTS																										COMMON ELEMENTS																									
CA																																																			
<p>Chromium alloys for use in the chemical industry. V K. Peshke and Kh. L. Iskhim. <i>Khim. Mashinostroyeniya</i> 1938, No. 5, 42-4; <i>Khim. Referat. Zhur.</i> 2, No. 3, 137 (1939). -- Cr cast iron (35% Cr) and Cr steels (RYa 1 (18% Cr and 8% Ni), EI 100 (12% Cr, 8% Mn and 3% Ni), FZh 17 (17% Cr), "Intalut" (20% Cr), "Tekhnol" (14% Cr and 4% Al), ordinary cast iron, boiler iron, Pb and Al were tested for corrosion resistance in the processes of acetylation, chlorination, phenylation, tolylation, sul- fonation and nitration. The Cr cast iron and steels cor- roded not at all, or much less than ordinary cast iron, Fe, Pb and Al. W. R. Henn</p>																																																			
<p>ASSOCIATE METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			
1ST AND 2ND COVERS																										PROCESSES AND PROPERTIES INDEX																									
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<p><i>C9</i></p> <p>Corrosion of metals in the amination of aromatic chlorides. V. K. Pershke and Kh. L. Tschilin. <i>Org. Chem. Ind. (U. S. S. R.)</i> 3, 604-7(1968); cf. C. A. 31, 17509.—Cr-Ni, Cr and C steels and boiler plate resist the corrosive action of NH_4Cl and CuSO_4 (catalyst) in the production of β-aminanthraquinone from the Cl deriv. and concd. NH_4OH at 200° and 50 atm. The inhibition of the corrosion of Fe in the presence of excess NH_4OH and gaseous NH_3 is traced to the impeded dissocn. of the NH_4Cl and copper-ammonia complex formed in the reaction.</p> <p>Chas. Blanc</p>																																																																																																							
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																																																																							
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10

Chemical resistance of aluminum in the production of organic compounds. V. K. Pershke and Kh. I. Tsvetkov. *Org. Chem. Ind.* (U. S. S. R.) 6, 682-6 (1939); cf. C. A. 31, 1759. —Several tables are given to show the relative resistance to corrosion of Al in the production of organic compds. and dyes, involving the use of HCO_2H , AcOH , H_2SO_4 , SO_2Cl_2 , and other reagents. Chas. Blanc

ASTM-A56 METALLURGICAL LITERATURE CLASSIFICATION

CA

18

Processes and Properties Index

The action of sulfuryl chloride on metals. V. K. Per-
shke and Kh. L. Tsiftin. *J. Applied Chem.* (U.S.S.R.)
12, 182-7 (in French, 187) (1939).—Dry SO_2Cl_2 does not
affect Al, Mg and Ni at room temp., but considerably
corrodes Cu and brass. It corrodes very slightly Cr
steel, Fe, cast Fe, Pb, Zn, Al bronze and German silver.
The corrosion of metals increases in moist SO_2Cl_2 , especially
in the case of Zn, Al, cast Fe, Cr steel and Fe. Corrosion
of Cu and Pb increases comparatively slightly because of
the protective action of the film formed on the metal.
A. A. Podgorny.

ASD-31A METALLURGICAL LITERATURE CLASSIFICATION

Ca

Influence of reducible organic compounds on the corrosion of metals by inorganic agents. Kh. L. Tseitlin. *Org. Chem. Ind. (U. S. S. R.)* 7, 101-6 (1949).--The action of 15 reducible org. compds. in inhibiting the destruction of metals by 10% NaCl and NH₄Cl and 0.5% and 1% HCl was studied. The tabulated results show that the corrosion of Cu is considerably retarded by the action of aliphatic and aromatic aldehydes, tartaric and oxalic acids and their alkali salts, glucose and maltose. Only pyrogallol and hydroquinone accelerated the corrosion of Cu. Cf. Pershke and Vinogradova. *C. A.* 31, 1769. C. H.

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
<p>Resistance of chromium alloys to hydrochloric acid</p> <p>Chromium alloys containing 10% Cr and 10% Ni are stable against HCl of not over 0.5% at temps. up to 100°C. This Fe is also stable in HCl of not over 0.5% even in the absence of HNO₃ which forms a passivating film. Cr steel of about 11% Cr was unstable under these conditions. The results are based on tests not exceeding 600 hrs.</p> <p>B. Z. Kaurich</p>																																																																																																			

Met. Lab.

4. Corrosion & Related Phenomena

*The Effect of Organic Reducing Agents on the Corrosion of Metal by Organic Agents. Kh. L. Tsvetina (Promysh. Otpad. Khimichesk. Tekhnol., 1940, 22, 103-105; *Chem. Zvesti.*, 1940, 111, 111, 177). In the corrosion of aluminium in slightly alkaline NaCl solution at room temperature is about 7.5 gm./m.² hr.; after addition of acetaldehyde, resorcinol, or hydroquinone, it is about 0.02-0.04 gm./m.² hr.; and with pyrogallol, pyrocatechol, or tartaric acid 0.10-0.28 gm./m.² hr. The corrosion of copper in 1% HCl solution at 70° C. (27 gm./m.² hr.) is reduced to a fraction of the original by addition of aldehydes, tartaric or oxalic acid, Seignette salt, and nitrates; it is increased by addition of higher phenols.

1943

CA

9

The work of the anticorrosion laboratory of the USSR ...
 Kh. L. Tselin and L. V. Merz-Lankhova. *Korrosiya i
 Korroz.* No. 7, No. 2, 32-4 (1941); *Chem. Zentr.* 1941, 1,
 1215. —The corrosion of some metals in the medium of
 aniline, *o*-toluidine and *m*-phenylamine was investi-
 gated. Concl. HCO_2H produces at 100° in all metals
 more or less strong corrosion. Perrosilid (15% Si) and
 Al (with 0.3% Si and 0.10% Fe) were the most resistant
 materials. Al with 0.56% Si and 1.11% Fe is less resist-
 ant. Ordinary cast Fe, Cu and Pb corrode very strongly.
 Fe with 30% Cr is resistant at room temp. for any length
 of time in HCl of less than 0.5% concn.; higher concns.
 up to 2.02% produce strong corrosion after 3 months. It
 is sufficiently resistant to 5% HBr . M. Hartenhein

AND SO ON DETAILING AT LITERATURE CLASSIFICATION

U.S. GOVERNMENT PRINTING OFFICE

4

M

CORROSION OF METALS (COPPER, STEELS, AND CAST IRON) BY HYDROCHLORIC ACID
AT A HIGH TEMPERATURE. Kh. L. Tseitlin (Zhur. Priklad. Khim., 1948, 21,
 (1), 38-41).---(In Russian). Earlier data on the attack of HCl on copper and
 ferrous materials are summarized and the apparatus used by T. for loss-in-
 weight tests is described. Results are given for tests on copper in air, super-
 heated steam, dry HCl, and the vapour of 4% HCl, at 325°-400°C.; on mild
 steel and 26% chromium steel in air, superheated steam, moist and dry HCl
 (alone and with added chlorine); and on cast iron. The copper was strongly
 attacked at the temp. studied.---G.V.H.T.

*Inst. Intermediate Org. Products +
 Dyestuffs in K. Ye. Voroshilov*

Sept. 1950

TSEYTLIN, Kh.L.

VAN, NO.8, 1950, pp 66-71.

Sci Res Inst of Organic Intermediate Products and Dyes at the final session of the conference of the Commission on the Control of Corrosion of Metals, Dept Chem Sci, Acad Sci USSR, submitted a report, "The influence of Chlorides on the Corrosion of Stainless Steels by Sulphuric Acid."

FD-973

USSR/Chemistry - Corrosion

Card 1/1 Pub. 50 - 16/19

Authors : Tseytlin, Kh. L., Kuracheninova, N. K., Babitskaya, S. M. Babakov, A. A.

Title : The corrosion of steel by hot solutions of caustic alkali under pressure

Periodical : Khim. prom., No 7, 438-440 (54-56), Oct-Nov 1954

Abstract : In the experimental work described, determined the resistance of 7 grades of steel to corrosion by hot solutions of caustic alkali under pressure. The type of corrosion studied leads to cracking of the steel. Four tables.

Institution: Institute of Organic Intermediates and Dyestuffs imeni K. Ye. Voroshilov.

TSEYTLIN, Kh. L.

USSR 4

✓ Corrosion of metals by the action of chlorine at high temperatures. (Kh. L. Tseitlin (*Zhur. prikl. Khim.*, 1954, 27, 953-958).—The velocity of corrosion of Cu, Al, and steel at 280-300° increases with rising rate of flow of Cl₂ to a much greater extent with dry than with damp Cl₂. This effect is ascribed to formation of protective oxide films in presence of H₂O. Corrosion of Al and steel is several hundred times lower when the Cl₂ contains 0-4% of H₂O, but dangerous pitting occurs with Al. Stainless steel and Ni are not corroded significantly by either dry or damp Cl₂. R. Trauscor.

62

Tseytlin, Kh. L.

AID P - 3422

Subject : USSR/Chemistry

Card 1/2 Pub. 152 - 7/18

Author : Tseytlin, Kh. L.

Title : ~~Effect of temperature on the corrosion of metals by chlorine~~
Effect of temperature on the corrosion of metals by chlorine

Periodical : Zhur. prikl. khim., 28, 5, 490-496, 1955

Abstract : Experiments were carried out with aluminum, iron, carbon steel, copper, nickel, stainless steel, and lead in a current of dry chlorine (250 ml./min.) for 6 hours. At a certain temperature rapid deterioration takes place, and the temperature rises sharply. The critical temperatures are: for Al, 160°C; iron Armko, 310°C; carbon steel, 285°C; cast iron, 240°C; copper, 300°C. Nickel and lead are affected at 450°C. One table, 1 diagram, 2 photos, 9 ref., 5 Russian (1931-1954).

Zhur. prikl. khim., 28, 5, 490-496, 1955

AID P - 3422

Card 2/2 Pub. 152 - 7/18

Institution : Institute of Organic Intermediates and Dyes im.
K. E. Voroshilov

Submitted : Ag 23, 1953

"APPROVED FOR RELEASE: 03/14/2001

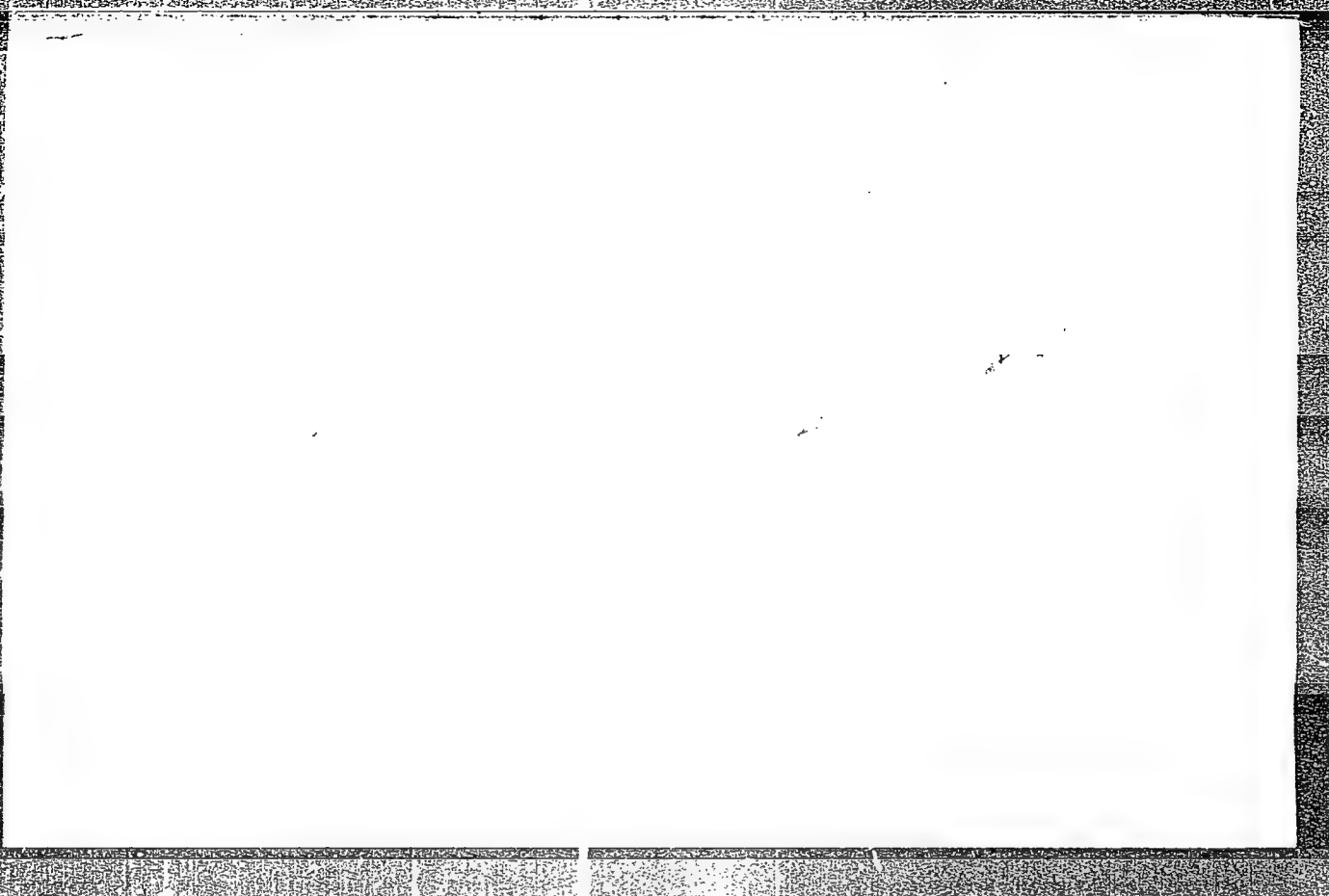
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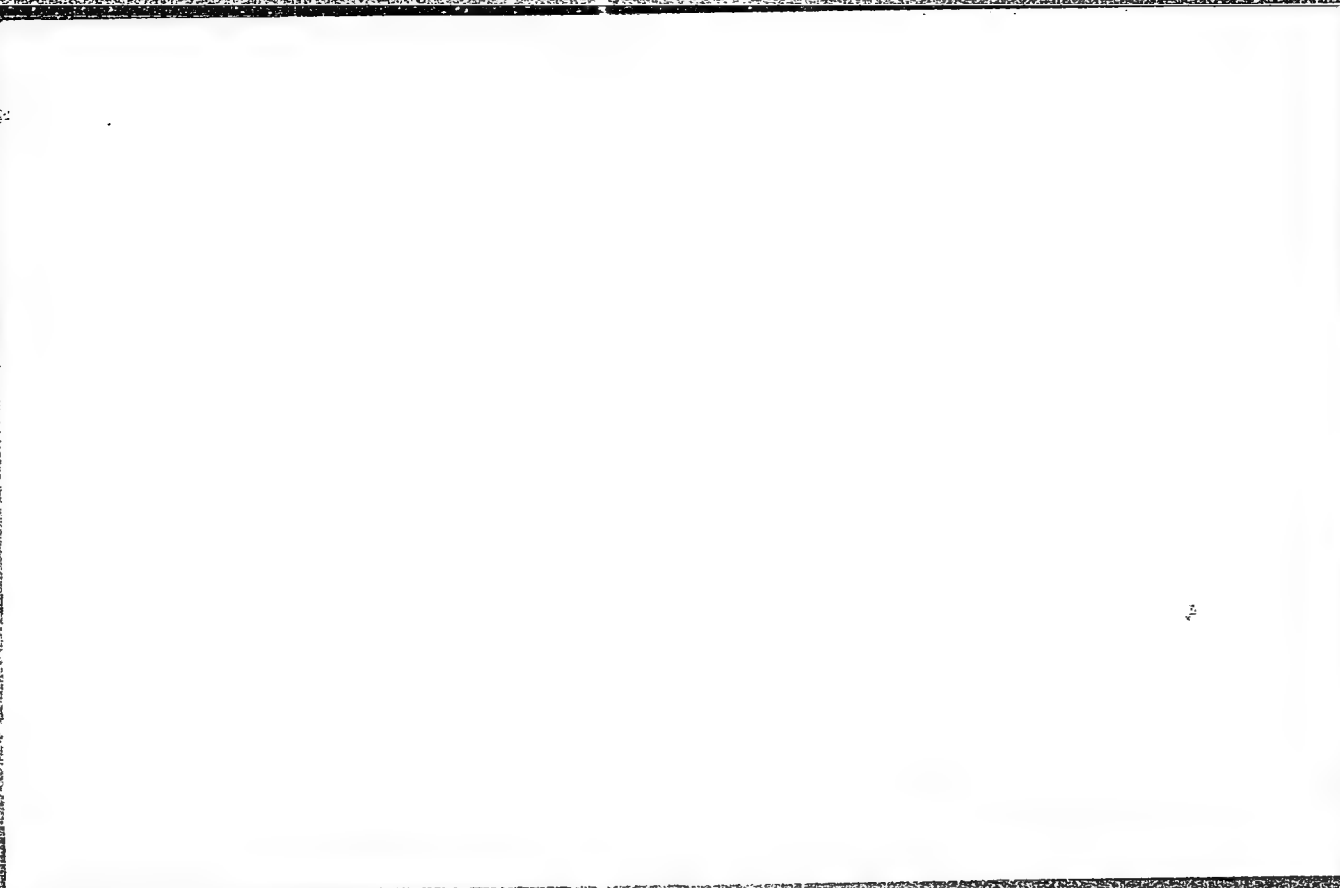
Tseytlin, Kh. L.

TSEYTLIN, Kh. L.

Effect of water vapor on the corrosion of metals by chlorine.
Zhur.prikl.khim. 29 no.8:1182-1191 Ag '56. (MIRA 10:10)
(Corrosion and anticorrosives)
(Chlorine)

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757020005-4



APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757020005-4"

Isotlin, K.M.

TSEYTLIN, Kh.L.; STRUNKIN, V.A.

Effect of air concentration on the corrosion of aluminum by
chlorine at high temperatures. Zhur.prikl.khim. 30 no.12:1790-1795
D '57. (MIRA 11:1)

1. Institut organicheskikh poluproduktov i krasiteley imeni
K.Ye. Voroshilova.
(Aluminum--Corrosion) (Chlorine)

AUTHORS: Tseytlin, Kh. L., Sal'tser, A. S., 30V/32-24-7-54/65
Zemlyanitskaya, N. N., Strunkin, V. A., Merzloukhova, L. V.

TITLE: Corrosion Determinations in Ampoules (Korrozionnyye opredeleniya v ampulakh)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 7, pp. 898 - 899 (USSR)

ABSTRACT: Of late glass ampoules are used for corrosion investigations of steel; the former make it possible to carry out several experiments at the same time, which fact is especially favorable in the case of small sample quantities, and in the determinations of rare metals, as well as of expensive and dangerous reagents. In the laboratory mentioned below an apparatus was constructed on this basis, which serves for the determinations of chemically resistive, rare metals in hydrochloric acid. The apparatus consists of a heatable steel drum with a steeltube grid into which eight steel shells for the glass ampoules are put. 40 ml liquid and two samples each were put into each ampoule; then they were put in a sealed state into the apparatus which was rotated by a reducing gear. After the experiment the ampoules are broken up. Corrosion experiments with tantalum in hydrochloric acid

Card 1/2

Corrosion Determinations in Ampoules

SOV/32-24-7-54/65

or in hydrochloric acid saturated with chlorine, or in HCl with an addition of hydrogen peroxide were carried out at 100 - 110°. On this occasion a corrosion rate of less than 0,005 g/m².hour was found. Thick-walled ampoules were also used for the determinations of nickel, copper, aluminium and other metals in molten AlCl₃ at 200°. The experiments with this apparatus must be carried out taking into account all precautionary methods known in the technique. There are 2 figures.

ASSOCIATION: Institut organicheskikh poluproduktov i krasiteley im.K.Ye. Voroshilova (Institute of Organic Semiproducs and Dyes imeni K.Ye.Voroshilov)

Card 2/2

TSEYTLIN, Kh.L.; BABITSKAYA, S.M.

Steel corrosion by hydrochloric acid in spheroidal form. Zhur.
prikl. khim. 31 no.1:84-89 Ja '58. (MIRA 11:4)

1. Institut organicheskikh poluprokovtov i krasitekey im. K.Ye.
Voroshilova.

(Hydrochloric acid)
(Steel--Corrosion)

TSEYTLIN, Kh.L.; STRUNKIN, V.A.

Effect of the dilution of chlorine with nitrogen on corrosion of
metals at high temperatures. Zhur.prikl.khim. 31 no.12:1843-1849
D '58. (MIRA 12:2)

1. Institut organicheskikh poluproduktov i krasiteley imeni K.Ye.
Voroshilova.
(Chlorine) (Nitrogen) (Corrosion and anticorrosives)

18.8300

307/80-33-1-28/49

AUTHORS: Tseytlin, Kh. L., Sorokin, Ya. I.

TITLE: Effect of Chlorine on the Corrosion of Metals in Hydrochloric Acid

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 1, pp 163-167 (USSR)

ABSTRACT: The effect of free chlorine (up to 0.9 g/100 ml) on the corrosion of lead, steel, silver, and EI-461 nickel-molybdenum alloy (not otherwise described in article) in hydrochloric acid of different concentrations (10 to 20%) and at different temperatures was studied. The following conclusions were made from the data obtained. Corrosion of lead, steel, silver, and EI-461 alloy in hydrochloric acid is sharply increased by free chlorine in the acid. Comparatively, the increase in the rate of corrosion is highest for EI-461 alloy and silver and lowest for steel. There is no difference in the rate of lead and steel corrosion in hydrochloric acid containing free chlorine. Both metals dissolve

Card 1/3

Effect of Chlorine on the Corrosion of
Metals in Hydrochloric Acid

77519

SOV 20-33-1-28/49

vigorously. The rate of corrosion in hydrochloric acid continuously saturated with chlorine increases, with the rise of temperature from 20° to 100°, for lead, steel, and silver, and decreases for the EI-461 alloy. The latter fact is explained by the high sensitivity of the alloy to the free chlorine concentration in the acid, which decreases with increasing temperature. Ag and alloy EI-461 are corrosion resistant in hydrochloric acid, which is a reducing acid. At a low acid concentration and at low temperature, lead is also only slightly corrosive in hydrochloric acid. In the presence of free Cl (Depolarizer of the cathode process) in HCl, as well as in other, similar, cases, Ag, alloy EI-461, lead, and carbon steel corrode rapidly. Experiments conducted by Kh. L. Tseytiin and S. M. Babitskaya in the authors' laboratory (see Association) show that Ti, which is usually easily passivated in oxidizing media, practically does not corrode in a hot hydrochloric

Card 2/3

Effect of Chlorine on the Corrosion of
Metals in Hydrochloric Acid

77519
SOV/80-33-1-28/49

acid containing free Cl. There are 7 figures; and 11 references, 1 U.S., 4 German, 6 Soviet. The U.S. reference is: W. G. Whitman and R. P. Russel, Ind. Eng. Ch., 17, 348 (1925).

ASSOCIATION: K. Ye. Voroshilov Institute of Organic Intermediates and Dyes (Institut organicheskikh poluproduktov i krasiteley imeni K. Ye. Voroshilova)

SUBMITTED: March 7, 1958

Card 3/3

5.2200

77535
SOV/80-33-1-44/49

AUTHORS: Sorokin, Yu. I., Tseytlin, Kh. L.

TITLE: Brief Communications. Effect of Chlorine on Corrosion of Metals by HCl in Narrow Gaps

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 1, pp 240-243 (USSR)

ABSTRACT: Corrosion of steel and especially of Pb in gaps by HCl, and also by acid containing free chlorine, depends on the factors regulating supply of HCl to the metal surface and removal of corrosion products. HCl and chlorine concentrations in gaps are less than in original solution. Therefore, in all cases, there is less corrosion in gaps than outside. The corrosion of steel and especially of Pb increases with increasing gap width and with stirring. The corrosion of Pb with 20% HCl in gaps is 20 to 40 times less than that of steel. The solubility of Pb and steel in HCl, in the presence of

Card 1/2

Brief Communications. Effect of Chlorine
on Corrosion of Metals by HCl in Narrow Gaps

77535
SOV/80-33-1-44/49

chlorine, increases much less in gaps than outside. The stability of Pb is 3 to 10 times greater than that of steel in the presence of chlorine in HCl. The volume and gap corrosion of Pb and steel in HCl vapors is much less than in liquid HCl. The corrosion of Pb and steel in gaps is increased 2- to 3-fold by the presence of chlorine in HCl vapors. There is 1 table; 1 figure; and 7 references, 1 U.K., 5 Soviet. The U.K. reference is: R. B. Mears, U. R. Evans, Trans. Faraday Soc., 30, 417 (1934).

ASSOCIATION: K. Ye. Voroshilov Institute of Organic Intermediates and Dyestuffs (Institut organicheskikh poluproduktov i krasiteley imeni K. E. Voroshilova)

SUBMITTED: August 20, 1959 (for the second time)

Card 2/2

s/080/60/033/04/17/045

AUTHORS: Tseytlin, Kh.L., Revazov, Ye.K., Strunkin, V.A. 21
TITLE: The Effect of Cathode Polarization of Tantalum on Its Electroconductivity 1
PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 4, pp 850 - 854
TEXT: Cathode polarization of tantalum in hydrochloric acid is accompanied by hydrogenation of the metal and leads to its cracking. In the experiments tantalum plates (with about 1% of niobium), 1 mm thick and 90 mm long and with a surface of 30 - 35 cm², were used as cathode. A graphite rod served as anode. The measurements were carried out in an oil bath and lasted 5 - 10 minutes. Under the conditions studied the electric resistance of tantalum in the case of cathode polarization increases in direct proportion to the quantity of hydrogen absorbed. With an increase in the duration of the cathode polarization of tantalum and the current density from 0.1 to 10 A/m², the amount of hydrogen absorbed by tantalum increases and consequently also its electroresistance. With an increase in the thickness of tantalum from 1 to 5 mm the time needed for the saturation with hydrogen increases considerably, and so does correspondingly the electroresistance. Cracking of tantalum starts during cathode polarization, if its

Card 1/2

S/080/60/033/04/17/045

The Effect of Cathode Polarization of Tantalum on Its Electroconductivity

specific electric resistance increases by 25 - 40% at 20°C and by 90 - 110% at 60°C relative to the initial value.

There are: 2 diagrams, 3 graphs and 8 references, 6 of which are Soviet and 2 German.

ASSOCIATION: Institut organicheskikh poluproduktov i krasiteley imeni K.Ye. Voroshilova
(Institute of Organic Semi-Finished Products and Dyestuffs imeni K.Ye. Voroshilov)

SUBMITTED: April 22, 1959

Card 2/2

AUTHOR: Tseytlin, Kh. L.; Rayner, G. J.

... and halogens

trudyn soveshchaniya. Moscow, 1980.

TOPIC TAGS: titanium, titanium corrosion, titanium chemical stability, halogen, titanium halide, nitro compound

ABSTRACT: Halogens generally increase the corrosion of iron, copper, nickel, lead and other metals in hydrochloric acid. Only tantalum, a very costly and rare metal, has high stability, although titanium has sufficient stability in hydrochloric acid up to a concentration of 5%. The present paper considers the effect of halogens on the chemical stability of titanium in halo acids. Titanium corrodes insignificantly in halo acids at room temperature, but at 90C corrosion reaches homogeneous proportions (about 400 mm/year in hydrochloric acid and 72 mm/year in hydrobromic acid). The addition of halogens to hydrochloric and hydrobromic acids was found to lower the corrosion rate of titanium, although increasing the temperature lowered the protective activity of the halogens. Corrosion.

L 15600-65

ACCESSION NR: AT4048065

boric acid and iodine decreased the corrosion of titanium to the same degree. The
boric acid and iodine only at high tempera-

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ACCESSION NR: AT4048065

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SUBMITTED: 5-1-65

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SUB CODE: MM

NO AC: 100 2+

Card 3 3

COLLECTION NO: AT-040066

S 0000/64/000/000/0160/0165

1. TITLE: Titanium corrosion in sulfuric and hydrochloric acid is delayed by
oxidizing agents

SOURCE: Sovetskoye gosudarstvennoye nauchnoye izdatel'stvo khimicheskoy literatury
Moscow, USSR

ABSTRACT: Titanium corrosion in sulfuric and hydrochloric acid is delayed by
oxidizing agents.

ACCESSION NR: A14048066

... the corrosion rate in 20% sulfuric acid. Addition of low concentrations of nitrite passivated the titanium in HCl and H₂SO₄, but the addition of

titanium being ensured in 20% HCl and H₂SO₄ with 0.01 M HNO₃ at 200 and with

ASSOCIATION: none

SUBMITTED: 1500164

ENCL: 00

SUB CODE: MM

NO REF SOV: 012

OTHER: 007

Card 2/2

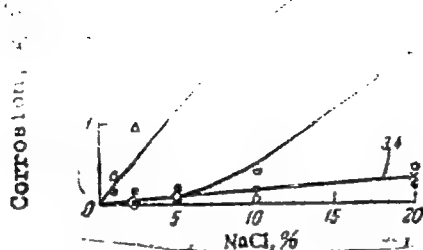


Fig. 1. Dependence of corrosion of steels in 0.2 N HCl on the addition of NaCl at room temperature over a 25 hr period. 1- OKh21N5T; 2- OKh21N6M2T; 3- Kh18N12M3T; 4- Kh18N10T

Card 3/3

L 62473-65

ACCESSION NR: AF501857

Steel II is not suitable for

[illegible]

ASSOC. ACADEM. J. C. A.

SUBMITTED: 00

2000

SUB CODE: MM,

GC

NO REF SOV: 009

OTHER: 005

Copy 2

SOLOVEY, Yu. I.: NYELIN, 1965.

Metal corrosion in a nitrate-nitrite melt at 500° C. *Khim. prom.*
/1 no. 1:66-67 za 1965. (1965) 18:3.

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov
i krasiteley.

ACCESSION NR: AR4015642

S/0081/63/000/022/0361/0361

SOURCE: RZh. Khimiya, Abs. 22K24

AUTHOR: Tseytlin, Kh. L.; Strunkin, V. A.; Fayngol'ts, L. L.; Sorokin, Yu. I.; Babitskaya, S. M.; Zal'tsman, T. D.

TITLE: Chemical stability of titanium in some corrosive media

CITED SOURCE: Vestn. tekhn. i ekon. inform. N.-i. in-t tekhn.-ekon. issled. Gos. kom-ta po khimii pri Gosplane SSSR, no. 3, 1963, 30-32

TOPIC TAGS: titanium, titanium chemical stability, corrosion, corrosion resistance, titanium corrosion, halogen, halogen corrosion, chlorination, bromination

TRANSLATION: Experimental data are given on the rate of Ti corrosion in the presence of free halogens and in the halo acids and sulfuric acid containing free halogen. Areas of application of Ti in the chemical industry are pointed out. Ti is recommended as a construction material for equipment designed for chlorination in an HCl medium at concentrations up to 20% and temperatures up to 60C, in the presence of less than 3 g free Cl₂ per liter HCl. Ti tips are used on

Card 1/2

ACCESSION NR: AR4015642

thermocouple casings for the chlorination of organic compounds in 18% HCl at 60-65C, and in the dehydration of maleic acid. Ti-equipment is recommended for the bromination of organic compounds in a water medium at 0-3C (pH~1) and a rapid course of reaction. Free halogens, Na nitrite, and some other additives decrease Ti corrosion in the hydrogen halides and sulfuric acid. The protective effect of halogens decreases sharply with a temperature increase to 60-90C, and with increased concentration and prolonged action of the corrosive medium. 29 references. N. Lukashina

DATE ACQ: 07Jan64

SUB CODE: CH, ML

ENCL: 00

Card 2/2

SOROKIN, Yu.I.; TSEYTLIN, Kh.L.

Effect of organic activating and retarding agents on the corrosion of metals by hydrochloric acid in narrow interstices. Zhur.prikl.-khim. 35 no.3:573-576 Mr '62. (MIRA 15:4)

1. Institut organicheskikh poluproduktov i krasiteley.
(Metals--Corrosion) (Inhibition (Chemistry)) (Hydrochloric acid)

SOROKIN, Yu.I.; TSEYTLIN, Kh.L.

Apparatus for determining the wear of materials in a fluidized
bed. Zav.lab. 27 no.8:1044-1045 '61. (MIRA 14:7)

1. Institut organicheskikh poluproduktov i krasiteley imeni K.Ye.
Voroshilova.

(Materials--Testing) (Fluidization)

26095

S/080/62/035/003/012/024
D217/D302

18 P300
AUTHORS:

Sorokin, Yu. I. and Tseytlin, Kh. L.

TITLE:

Influence of organic activators and inhibitors on
the crevice-corrosion of metals by hydrochloric acid

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 3, 1962, 573-576

TEXT: The rate of corrosion was determined by the IFKh method of the AS USSR. Discs of unsaturated graphite with slits cut in them were used to cover a steel plate which was rotated continuously in the corroding medium at 100 r.p.m. Specimens for corrosion were screwed into the crevices with graphite screws. 600 ml of pure 20% HCl solution containing 6 g of pure organic additive were used as the corroding medium. The tests were performed on carbon steel and lead at temperatures of 20° and 60°C, over 3 hours. Nitrobenzene, o-nitrotoluene and p-nitrochlorobenzene were used as organic activators, while formaldehyde (40% solution), urotropin and PB-5 (PB-5) were used as inhibitors. It was found that organic nitro-compounds (depolarizers of the cathode process) intensify the cor-

Card 1/2

Influence of organic ...

S/080/62/035/003/012/024
D217/D302

rosion of lead and steel by hydrochloric acid both in the bulk and in the crevices. The activating action of nitrocompounds in narrow crevices is considerably less than in the bulk. In the presence of activators, the rate of corrosion of metals in crevices is, therefore, less than that in the bulk. Organic inhibitors diminish the corrosion of steel by hydrochloric acid not only in the bulk but also in the crevices. The retarding action of inhibitors in narrow crevices is considerably less than in the bulk. Thus, in the presence of inhibitors, the corrosion of metals in crevices is greater than in the bulk. The above influences of organic activators and inhibitors on crevice corrosion in metals is due to the difficulty with which they are transported to the affected areas. There are 2 tables and 14 Soviet-bloc references.

ASSOCIATION: Institut organicheskikh poluproduktov i krasiteley
(Institute of Organic Semi-Products and Dyes)

SUBMITTED: January 30, 1961

Card 2/2

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S/080/60/033/012/023/024
D209/D305

AUTHORS: Tseytlin, Kh.L., and Strunkin, V.A.

TITLE: Influence of chlorine on the corrosion of titanium by hydrochloric acid

PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 12, 1960,
2796 - 2799

TEXT: The corrosion of titanium by various acids and oxidizers has been studied by I.I. Kornilov (Ref. 1: Khim. nauka i prom. 3,6, 803 1958), V.N. Eremenko (Ref. 5: Titan i yego splavy (Titanium and its Alloys), Izd. AN UkrSSR, Kyev, 1955) and others, but relatively little is known of the effect of chlorine on the stability of Ti in HCl apart from some data recently published by P.J. Gegner et al. The authors accordingly conducted a series of tests in order to obtain further information on this problem, the specific objectives being the determination of the influence of a fixed amount of free chlorine and the effects caused by varying its concentration in the HCl solution. The experimental procedure involves the

Card 1/4

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Influence of chlorine on the ...

insertion of a Ti specimen (30 x 16 x 1.5mm) in a glass holder; the placing of the holder in a test tube provided with a reflux condenser; the addition of 150 ml of conc. HCl; and the supply of Cl₂ gas to the solution from a cylinder. The results confirm previous data on the high degree of Ti corrosion in HCl, especially at elevated temperatures and acid concentrations; however, free chlorine markedly retards this process. Thus, no Ti is dissolved at room temperature whatever the concentration of HCl provided the acid is continuously saturated with free chlorine (10 ml/min). Under these conditions Ti is also stable at the following temperatures and concentrations of HCl: 90° -- 5 %; 80° -- 10 %; 70° -- 15 %; 60° -- 20 %. As regards the influence of the concentration of free chlorine on the corrosion of Ti in 20 % acid, it is shown that 0.001 g Cl₂/100 ml HCl is sufficient to bring about a 100-fold decrease in the rate of metal solution. This effect is annulled when the exposure time is increased to 25 - 50 hours. But Ti remains in a passive state for periods of 25 and 50 hours if the initial concentration of the solution is increased to 0.037 and 0.084 g Cl₂/100 ml

Card 2/4

Influence of chlorine on the ...

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HCl respectively. The authors do not know of any other metal apart from Ta which resists attack by chlorinated HCl. This phenomenon is of special interest since Kh.L. Tseytlin (Ref. 7: Zh. prikl. khimii 33, 1, 160, 1960) has shown that chlorine often accelerates the corrosion of many metals and their alloys. The authors infer from the data of M.V. Mal'tsev et al (Ref. 10: Giredment, sb. nauch. tr. 1, 481, Metallurgizdat, 1959) that the resistance of Ti to corrosion by chlorinated acid is due to the formation of an inert film of oxide. This passive layer evidently has a tendency towards splintering and exfoliation which is best prevented by continuously saturating the HCl with free chlorine, and it is concluded that such a technique helps to reduce the solubility of the film in a solution of HCl possessing a concentration of $\leq 20\%$ and a temperature of $\leq 60^\circ$. There are 2 figures and 11 references: 6 Soviet-bloc and 5 non-Soviet-bloc. The references to the English-language publications read as follows: L.W. Gleekman, Corrosion, 14, 9, 15, 1958; P.J. Gegner et al, Corrosion, 15, 7, 19, 1959. X

Card 3/4

Influence of chlorine on the ...

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ASSOCIATION: Institut organicheskikh poluproduktov i krasitel'yey
im. K.Ye. Voroshilova (Institute of Organic Semipro-
ducts and Dyestuffs im. K.Ye. Voroshilov) X

SUBMITTED: March 12, 1960

Card 4/4

TSEYTLIN, Kh.L.; SOROKIN, Yu.I.

Role of chlorine in the corrosion of metals by hydrochloric
acid. Zhur.prikl.khim. 33 no.1:163-167 Ja 60. (MIRA 13:5)
(Metals--Corrosion)
(Chlorine)
(Hydrochloric acid)

SOROKIN, Yu.I.; TSeytlin, Kh.L.

Effect of chlorine on the corrosion of metals by hydrochloric acid in narrow interstices. Zhur.prikl.khim. 33 no.1:240-243
Ja '60. (MIRA 13:5)

1. Institut organicheskikh poluproduktov i krasiteley imeni
K.Ye. Voroshilova.
(Metals--Corrosion) (Chlorine) (Hydrochloric acid)

TSEYTLIN, Kh.L.; STRUNKIN, V.A.; REVAZOV, Yo.K.

Effect of cathodic polarization on the stability of tantalum
in hydrochloric acid. Zhur.prikl.khim. 33 no.2:345-348
F '60. (MIRA 13:5)

1. Institut organicheskikh poluproduktov i krasiteley imeni
K.Ye.Voroshilova.
(Tantalum) (Polarization(Electricity))

TSEYTLIN, Kh.L.; STRUNKIN, V.A.

Effect of chlorine on the corrosion of titanium by hydrochloric acid. Zhur. prikl. khim. 33 no.12:2796-2799 D '60. (MIRA 14:1)

1. Institut organicheskikh poluproduktov krasiteley imeni K.Ye. Voroshilova.

(Titanium—Corrosion)

(Chlorine)

TSEYTLIN, K.M., uchitel'nitsa

Experimental work of young naturalists from the Trubnikoborsk
school. Biol. v shkole no.1:58-60 Ja-F '62. (MIRA 15:1)

1. Trubnikoborskoy vos'miletney shkoly Tosnenskogo rayona
Leningradskoy oblasti.
(POTATOES) (CORN(MAIZE))

TSEYTLIN, L.

TSEYTLIN, L., inzhener.

New ventilators. Muk.-elev.prom. 21 no.2:20-22 F '55.

(Fans, Mechanical)

(MIRA 8:3)

CHADIN, A. I. and PROKHORYANOV, N. I., and unpublished.

Mem., Dept. Plant Biochemistry, Moscow State University im. Lomonosov, -1944-.

"Enzymic Treatment of Bran as a Means of Increasing its Digestibility," Dok. AN, 46, No. 6, 1945 *of 258-61*

TSEYTLIN, L.

Turbulent chips. Izobr.i rats. no.12:10-12 D '61.

(MIRA 14:12)

1. Nachal'nik tsentral'noy laboratorii tokarno-freznykh rabot
Moskovskogo avtozavoda imeni Ikhacheva.
(Metal cutting)

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General basis for the calculation of self inductance coefficients of curvilinear conductors. TARTAG, L. A. *Elektricheskoe* (No. 7) 52-8 (1946) In Russian.—A method involving Bessel functions is proposed for obtaining inductances of irregularly shaped conductors by relating certain parameters to the shape and length of the axis only, and other parameters to the dimensions of the cross-section of the conductor and the cross-sectional current distribution. A. L.

ASH-LLA METALLURGICAL LITERATURE CLASSIFICATION

TSEYTLIN, L. A.

"A. General Expression for the Self-Inductance of a Curvilinear Wire," Dok. AN, 54, No. 1, 1946

"On Maxwell's Method of Geometrical Mean Distances," Dok. AN, 54, No. 2, 1946

"The Self-Inductance of a Wire Curved into a Circular Arc," Dok. AN, 53, No. 5, 1946